



## **SOT-223**

### **RoHS Compliance Document**

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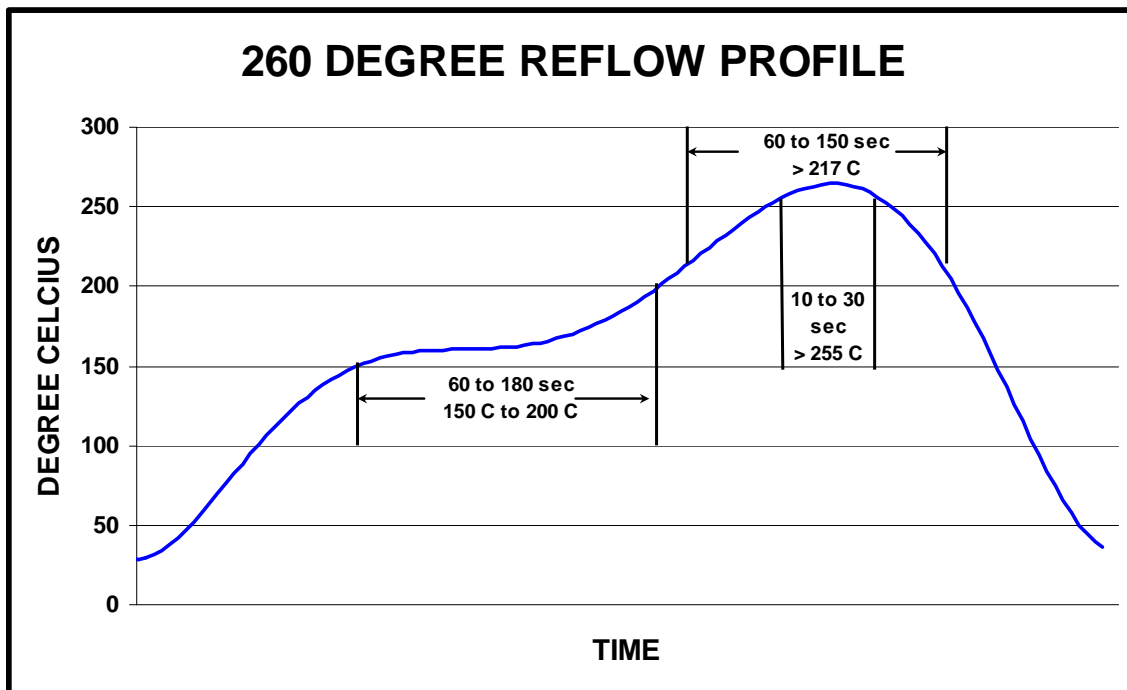
1. Composition
2. Solder Reflow
3. Tin Whisker Report



**SOT-223 IR Subcon**

Component	Material Name	Material Mass (g)	Element Name Composition	CAS #	Substance Mass (g)	Material Analysis Weight (%)	% of Total Weight
Chip	Silicon	0.00280	Si	7440-21-3	0.00280	100%	2.4%
Encapsulant	Epoxy Resin	0.04600	SiO2	7631-86-9	0.03703	80%	31.7%
			Epoxy	90598-46-2	0.00552	12%	4.7%
			Other	-	0.00345	8%	3.0%
Lead Frame	Copper	0.06430	Cu	7440-50-8	0.06261	97%	53.6%
			Other	-	0.00170	3%	1.5%
Die Attach	Soft Solder	0.00175	Pb	7439-92-1	0.00167	96%	1.4%
			Sn	7440-31-5	0.00004	2%	0.0%
			Ag	7440-22-4	0.00004	3%	0.0%
Wire bond	Gold	0.00020	Au	7440-57-5	0.00020	100%	0.2%
Lead Finish	Matte Tin*	0.00170	Sn	7440-31-5	0.00170	100%	1.5%
<b>MSL1 at 260 C</b>		Total Weight (g)		<b>0.11676</b>			

\* Tin whisker mitigation strategy is 150 C, 1 hour anneal within 24 hours of tin plating.



This part is compliant with EU Directive 2002/95/EC (RoHS) and does not contain lead, mercury, cadmium (0.01%), hexavalent chromium, PBB or PBDE in concentrations greater than 0.1%, except as permitted by Annex (7).



**SOT-223 IR**

<b>Test Definition</b>	<b>Test Conditions</b>	<b>Inspection Interval Class 1 and 2 Products</b>	<b>Total Duration Class 1 and 2 Products</b>	<b>Maximum Whisker Length (um)</b>
<b>Room Temperature Humidity Storage</b>	30± 2°C/60± 3%RH	1000 hours	4000 hours	20
<b>Temperature Humidity Unbiased</b>	55± 3°C/85±3% RH	1000 hours	4000 hours	20
<b>Temperature Cycling</b>	-40 to 55°C to 80 to 95°C, air to air, 10 min soak, approx 3 cycles /hours	500 cycles	1500 cycles	45

Tin Whisker testing per JESD201, Environmental Acceptance Requirements for Tin Whisker Susceptibility of Tin and Tin Alloy Surface Finish

Tin Whisker Results (number of failing whiskers)

<b>Test</b>	<b>1000 Hours</b>	<b>2000 Hours</b>	<b>3000 Hours</b>	<b>4000 Hours</b>
<b>Room Temperature Humidity Storage</b>	0/36	0/36	0/36	0/36
<b>Temperature Humidity Unbiased</b>	0/36	0/36	0/36	0/36
<b>Test</b>	<b>500 Cycles</b>	<b>1000 Cycles</b>	<b>1500 Cycles</b>	
<b>Temperature Cycling</b>	0/36	0/36	0/36	